



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/821,327

04/09/2004

Andrew C. Shum

BW-DKT03159

9688

32175 7590 12/22/2006  
BORGWARNER INC.  
3850 HAMLIN ROAD  
AUBURN HILLS, MI 48326

EXAMINER

PILKINGTON, JAMES

ART UNIT

PAPER NUMBER

3682

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

12/22/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/821,327

Applicant(s)

SHUM, ANDREW C.

Examiner

James Pilkington

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Prosecution Application***

1. The request filed on 10/20/2006 for a Continued Examination (RCE) is accepted and a RCE has been established. An action on the RCE follows.

### ***Claim Objections***

2. Claim 1 objected to because of the following informalities: a comma should be inserted between "their respective pair of bolt slots" and "the first..." in line 11.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clm 1, it is not clear to the examiner how the first distance can be smaller than the second distance. The first distance is between the bolt shafts (clm 1 lines 5-6) and the second distance is between the slots for the bolt shafts (clm 1, lines 9-10). If the bolts cannot move (the first distance) how can the second distance be smaller if the slots come in contact with the bolts? It appears that the bolts would stop the slots from moving leaving the first distance equal to the second upon thermal expansion.

Re clm 6, it is not clear to the examiner if "the at least one first distance" is the same as the first distance in clm 1. If it is the same distance is the limitation of "at least

Art Unit: 3682

one first distance is greater than the second distance" for when the in a state of thermal expansion as recited in clm 1 or when it is not in a state of thermal expansion?

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 6-10 and 12, as best understood, are rejected under 35 U.S.C.

103(a) as being unpatentable over Groger et al, USP 4,832,664, in view of Kato, USP 6,296,432 B1.

Re clms 1 and 7, Groger discloses a chain guide mounting system (Fig 1) which is mounted to an internal combustion engine (col 3 lines 13-15). Groger also discloses pins (28,29) being a first distance apart (Fig 1). The chain guide (Fig 1) having at least two slots (30,31) for receiving the pins, wherein the chain guide is mounted with the pins (28,29) through the slots (30,31) to the mounting surface, nearest edges of each pair of slots (30,31) of the chain guide, when mounted, being spaced apart by a second distance, wherein for at least one pair of pin shafts (28,29) and at least one pair of slots (30,31) the first distance is "equal to or slightly smaller" than the second distance such that the pin shafts (28,29) contact the nearest edges of the slots (30,31) (Fig 1).

Groger does indeed disclose pins (28,29) s/he does not disclose the mounting means as bolt.

Kato teaches bolts (101) that comprise a bolt threaded section (103A) complementary to the bolt holes (105A) and a bolt shaft (103) extending from the bolt threaded section (103A), wherein the bolt (101) is mountable in the bolt holes (105A) for the purpose of connecting the bolt to a female screw member (105A) (col 1 lines 5-15), thus providing for an improved fastening means.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Groger, as taught by Kato, and provide bolts as the means of securing the chain guide to the engine.

Re clms 2 and 8, a chain guide is under no load when the chain is not in contact with the surface of the chain guide. Therefore, any chain guide can be under no load by removing the chain.

Re clms 3 and 9, a chain guide is under a load when the chain is in contact with the surface of the chain guide. Therefore, any chain guide can be under a load when the chain is in place.

Re clms 4 and 10, Groger discloses the mounting surface being an engine housing (col 3 lines 13-15).

Re clms 6 and 12, Groger discloses that one first distance is greater than the second distance such that at least one of the bolt shafts (28,29) does not contact the nearest edges of the bolt slots (30,31) (Fig 4).

### ***Response to Arguments***

7. Applicant's arguments filed October 20, 2006 have been fully considered but they are not persuasive.

Art Unit: 3682

8. Applicant argues that neither Gröger or Kato teach or suggest a distance between nearest edges of bearing pins equal to or less than a distance between nearest edges of their respective slots such that the pins contact the nearest edges of the bolt slots.

In response, it is the examiner's position, as discussed in an interview with Kraig Haverstick (attorney for applicant) on December 7, 2006, that although Gröger's figures do not explicitly disclose the distances being equal to or less than one another Gröger does suggest that the pins are capable of coming in contact with the edge of the slot which would make the two distances equal. Gröger discloses in C3/L17-20 that the slotted bore is provided to compensate for thermal expansion of the guide rail. Upon thermal expansion of the guide rail the pin is capable of contacting the nearest edge of the slot and therefore making the two distances equal to each other. Since clms 1 and 7 recites "wherein at an operating temperature" in line 10 and 9, respectfully, and thermal expansion happens at temperatures higher than ambient temperatures (e.g. operating temperature of an engine) Gröger anticipates both of the independent claims in the instant application.

9. Applicant also argues that Kato does not teach a chain guide having slots or a mounting surface for mounting bolts. Examiner agrees however, the reference of Kato is only being used to teach that a bolt can be used in a system as a means of securing two or more parts together.

**Conclusion**

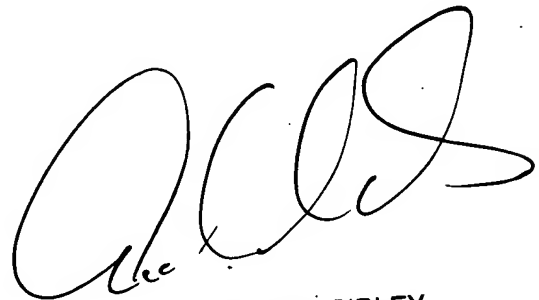
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP  
JP

12/12/2006

A handwritten signature in black ink, appearing to read 'Richard Ridley', is written over a large, stylized, circular mark that resembles a large 'R' or a loop.

RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER